

## Coal-Fired Power Plant Retirement

**Policy Summary:** As recently as 2009, four coal-fired power plants were generating electricity in Massachusetts. By 2020, none of them will be operational. Three have already ceased operation: Somerset Station, Salem Harbor Station, and Mt. Tom Station. The owner of the Brayton Point Station in Somerset has indicated that it expects the plant to close in 2017. While recent federal regulations have played a role in the plant owners' decisions to retire their facilities, the primary driver of this change has been the availability of relatively inexpensive natural gas.

	Savings from full policy implementation	% of 1990 level
Economy-wide GHG reductions in 2020	5.0 MMTCO <sub>2</sub> e	5.3% <sup>59</sup>

**Rationale:** Emissions from coal combustion are significantly higher than other fossil fuels for a given amount of electricity production.

**Policy Design:** In addition to fuel prices, several existing or upcoming federal regulations may have influenced decisions to retire these power plants. For example, limits on emissions of SO<sub>2</sub> and mercury have come into force or been revised downward in recent years, and new air quality standards issued in 2015 may require additional reductions in NO<sub>x</sub> pollution. While the recently finalized Clean Power Plan—EPA's regulation to reduce carbon dioxide emissions from existing electric power plants—will not take effect until 2022, it could also have influenced the owners' decisions about the long term viability of coal-fired power plants in Massachusetts.

In addition to air pollution regulations, cooling water regulations under the federal Clean Water Act also affect coal-fired power plants. For example, cooling towers installed at Brayton Point Station impose significant operating costs. Along with the costs of operating air emission control equipment, these costs have reduced the ability of coal-fired power plants to compete with cleaner natural gas in electricity markets.

**GHG Impact:** If the closure of these four power plants results in them being displaced by natural gas-fired power plants, there would be a net 5 MMTCO<sub>2</sub>e in 2020.

**Other Benefits:** Reduced exposure to fine particulates and ozone will have health and environmental benefits.

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<sup>59</sup> Note: The announced closure of the Pilgrim power plant would lower 2020 reductions to 2.7 MMTCO<sub>2</sub>e or 2.9% of the 1990 emissions level.